EXHIBIT 16.1-4 — APPLICATION SERVICES LABOR CATEGORIES

COUNTY OF SAN DIEGO/HP ENTERPRISE SERVICES, LLC   IT AND TELECOMMUNICATIONS SERVICE AGREEMENT
AMENDED & RESTATED VERSION 02

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1. PROGRAM MANAGER

Description: A Program Manager is responsible for the most complex projects.   Complex projects are defined:

- Labor Costs greater than $1,000,000 (excluding license or hardware costs) or
- Projects so designated by the GITM

This classification manages both internal and external project teams and interacts with County executives, County department heads, various County staff, and individuals of similar status from County vendors. This classification must have the ability to establish and maintain cooperative working relationships; use interdisciplinary teams effectively in the conduct of the project; speak effectively before large groups; reason logically and creatively and use a variety of analytical and research techniques to solve complex problems; be proficient in the use of cost and schedule tools; analyze situations and propose an effective course of action; analyze data; identify the need for and provide creative thinking related to complex problems, develop and evaluate alternatives; write thorough, credible, well-documented reports; work within tight deadlines.   The Program Manager has full responsibility for the project, budget, schedule, project tasks and deliverables and may be the lead to the County vendors.

Experience: This classification must have a minimum of eight (8) years of broad and extensive project experience. At least four (4) years of that experience must have been in a lead capacity.

Education: This classification requires (1) the possession of (i) a baccalaureate or equivalent university degree and a minimum of 4,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes within the last six (6) years, (ii) an associates degree and a minimum of 6,000 hours of project management experience within initiating, planning, executing, controlling, or closing processes, or (iii) a high school diploma or equivalent secondary school credential and a minimum of 7,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes; and (2) PMP certification or contractor equivalent.

Work Products: Examples of work products include: Project Plan, Project Proposal, Statement of Work, Project Status Report, Client Program Review template, CTO review template, and Lesson Learned Document.

2. PROJECT MANAGER

Description: This classification manages both internal and external project teams and interacts with County executives, County department heads, various County staff, and individuals of similar status from a County vendor. This classification must have the ability to establish and maintain cooperative working relationships; use interdisciplinary teams effectively in the conduct of the project; speak effectively before large groups; reason logically and creatively and use a variety of analytical and research techniques to solve

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complex problems; be proficient in the use of cost and schedule tools; analyze situations and propose an effective course of action; analyze data; identify the need for and provide creative thinking related to complex problems, develop and evaluate alternatives; write thorough, credible, well-documented reports; work within tight deadlines. The Project Manager has full responsibility for the project, budget, schedule, project tasks and deliverables and may be the lead to the County vendor.

Experience: This classification must have a minimum of five (5) years of broad and extensive project experience. At least two (2) years of that experience must have been in a lead capacity.

Education: This classification requires (1) the possession of (i) a baccalaureate or equivalent university degree and a minimum of 4,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes within the last six (6) years, (ii) an associates degree and a minimum of 6,000 hours of project management experience within initiating, planning, executing, controlling, or closing processes, or (iii) a high school diploma or equivalent secondary school credential and a minimum of 7,500 hours of project management experience within initiating, planning, executing, controlling, or closing processes; and (2) PMP certification or contractors equivalent.

Work Products: Examples of work products include: Project Plan, Project Proposal, Statement of Work, Project Status Report, Client Program Review template, CTO review template, and Lesson Learned Document.

3. SYSTEMS ANALYST

Description: A Systems Analyst performs the elicitation, documentation, and analysis of requirements for the development, installation, implementation, procurement, or support of custom developed systems or third party developed systems. This classification must be able to analyze data and business processes, identify and solve problems, reason logically and draw valid conclusions; apply creative thinking in the design of methods of processing data; establish and maintain effective working relationships with others; communicate effectively verbally and in writing. The Systems Analyst will have general domain understanding of the overall County business and the specific department function.

Specific activities performed will include:

- Participates as an active participant in work groups and work sessions with business and technical representatives;
- Assists clients in articulating and defining their business requirements;
- Provide documentation of the business requirements;
- Utilizes experience in development methodologies, documentation and industry standards to define and develop business requirements and functional specifications; and
- Perform Business Risk Assessment analysis and support Project Manager in determining Project Risk and Risk Mitigation.

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Experience: This classification must have a minimum of six (6) years experience in working on software application development projects. At least three (3) years of that experience must have been associated with application requirements management.

Education: This classification requires the possession of a (1) baccalaureate or equivalent university degree in management information systems, (2) associates degree with two (2) additional years experience in software development, or (3) high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Requirements Document, Project Proposal, Requirements Traceability matrix, and Risk Management Plan.

4.   SENIOR APPLICATION DEVELOPER

Description: A Senior Application Developer acts in a lead capacity on the most complex applications, and/or on the most complex data processing problems and can work independently.

A Senior Applications Developer has experience in electronic data processing systems study, design, and programming. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Experience: This classification must have a minimum of eight (8) years experience in working on software development projects.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Unit Test Plan, Computer Programs, Software Configuration Item List, and Root Cause Analysis Form.

5.   APPLICATION DEVELOPER

Description: An Application Developer acts under general supervision, and can act in a lead capacity on application assignments, and/or on complex data processing problems and can work independently.   An Application Programmer has experience in electronic data processing systems study, design, and programming.   This classification must have

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knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Experience: This classification must have a minimum of 3.5 years experience in working on software development projects. At least two (2) years of that experience must be in a single language unless technology precludes it.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Unit Test Plan, Computer Programs, Software Configuration Item List, and Root Cause Analysis Form.

6. ASSOCIATE APPLICATION DEVELOPER

Description: An Associate Application Developer acts under general supervision on projects, enhancements and operational support for various business applications. This classification must have the ability to develop software from detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draft and present valid conclusions; apply creative thinking in the support of business applications; establish and maintain cooperative working relationships with those contacted in the course of the work.

The Associate Application Developer (or Software Engineer) will have knowledge or demonstrated capability in the following curriculums: software development life cycle methodology (SDLC), business process management (BPM), service oriented architecture (SOA), software engineering disciplines, Microsoft .NET, J2EE, SharePoint, Business Intelligence

Minimum Qualifications:
Position requires (1) a baccalaureate or equivalent university degree in Computer Science, Systems Engineering or related degrees, (2) an associate degree with two (2) years experience in software development, or (3) a high school diploma with four (4) years experience in software development.

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7. APPLICATION DEVELOPER—ADVANCED TECHNOLOGY

Description: An Application Developer—Advanced Technology acts under general supervision, and can act in a lead capacity on application assignments, and/or on complex data processing problems and can work independently. This classification must have the minimum technical experience described in Table 2, or the then current version of Table 2 as updated annually by mutual agreement of County and Contractor. An Application Developer—Advanced Technology has experience in electronic data processing systems study, design, and programming. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

Experience: This classification must have a minimum of five (5) years experience in working on software development projects. At least four (4) years of that experience must be in a single language, development environment, or ERP application functionality identified in Table 2.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Unit Test Plan, Computer Programs, Software Configuration Item List, and Root Cause Analysis Form.

Table 2 Technical Experience (minimum 1 technology)

ORACLE DEVELOPER SUITE	PEOPLETOOLS	ERP (I.E., ORACLE OR PEOPLESOFT) APPLICATION FUNCTIONALITY
C#.NET	J2EE/JAVA	Documentum

8. WEB DESIGNER

Description: A Web Designer acts under general supervision, and can act in a lead capacity on application assignments, and/or on complex data processing problems and can work independently. A Web Designer designs and builds web sites using a variety of graphics software applications, techniques, and tools. Designs and develops user interface features, site animation, graphics, and special effects elements. Contributes to the design efforts to enhance the look and feel of the organization's on-line offerings and is considered proficient

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in graphic design elements and the presentation of content. Designs the website to support the organization's strategies and goals relative to web communications. Requires understanding of web-based technologies and thorough knowledge of HTML, Photoshop, Illustrator, and/or other design related applications.

Experience: This classification must have a minimum of two (2) years experience in working on software development projects. At least one (1) year of that experience must be in web design.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree in management information systems or computer science, (2) an associated degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Unit Test Plan, Computer Programs, Software Configuration Item List, Graphics, and Animation.

9. APPLICATION ARCHITECT

Description: An Application Architect provides technical direction to projects/tasks and is responsible for end-to-end system design. The Application Architect develops, communicates, maintains, and enforces the overall architecture of the information system-applications, data, and technical infrastructure. The system architect knows what the system pieces are and how they fit together. The Application Architect:

- Has a thorough understanding of business process design techniques and participates in the high-level business process design;
- Is a master of application architecture and leads the application architecture definition;
- Has a thorough understanding of entity modeling and participates actively in high-level entity modeling activities;
- Has a thorough understanding of platform architectures and network architectures (sizes hardware, determines platforms);
- Assess performance, tuning and capacity requirements to determine key technology decisions;
- Is responsible for the interrelated architectures of the computer system, that is, the integrity of design, communications, interfaces between application subsystems, and supporting databases;
- Oversees the activities of the Database Administrator and the Software Configuration Analyst;
- Has primary responsibility for all aspects of Architectural Engineering;
- Thoroughly understands testing and participates in the broader levels of test planning; and
- Ensures effective SCM across applications.

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Experience: This classification must have a minimum of seven (7) years experience working on software development projects. At least three (3) years of that experience must be in end-to-end system design, modeling, and tuning.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree or certificate in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Conceptual Architecture Diagram, Interface Design Document, System Architecture Study, Vendor Requirements Questionnaire, and Engineering Documents.

10. PROJECT SCHEDULER

Description: As part of the Program Planning and Control (PP&C) organization within the NGIS Civil Systems division, the County of San Diego (CoSD) scheduler will be responsible for the implementation of standard processes, tools and program planning and control practices for all CoSD schedules. Reporting administratively to the PP&C Manager and taking day-to-day direction from the program CoSD PMO, the candidate will develop and manage complex project execution schedules on fast-paced and interrelated projects for the CoSD application programs. This position will be responsible for the following:

- Developing Integrated Master Plan (IMP) and Integrated Master Schedule (IMS) baseline schedules to meet all program objectives
- Monitoring schedule performance and interdependencies
- Executing critical path analysis, schedule risk analysis and cost/schedule integration
- Quality and accuracy of the schedule database and integration with other program schedules
- Ensuring major projects and program schedules and plans are horizontally and vertically integrated across company functional groups including finance, engineering, material, manufacturing, and quality.
- Tracks plans and schedules, performing risk analysis, identifying and resolving critical path and network logic conflicts.
- Use of Gantt, PERT, milestone charts, earned value management and other project management techniques to gauge progress and identify performance variances to facilitate focus and intervention on critical areas.

Experience: This position requires extensive planning and scheduling experience with exposure to IT infrastructure and network planning and implementation. Experience developing complex schedules in an Earned Value (EV) environment is highly desirable. This individual must possess strong team collaboration and problem-solving skills. Minimum qualifications: Bachelors Degree, experience with Microsoft Project with at least 6 years experience in scheduling and project management, versatile in MS Office applications, particularly MS Excel and MS Word. Desirable qualifications: experience working in a multiple-MS Project environment, experience with MS Project, PMP certification

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11. MISSION ASSURANCE PROJECT ENGINEER

Description: The IT PMO Mission Assurance (MA) role and responsibility is as an active team member in (a) the execution of all project management processes and procedures, and (b) proactive leadership in the review and remediation of all associated artifacts from project inception through final delivery. This role will assure that the mission of each individual project is accomplished as specified by the County of San Diego and ITO.

- Facilitate Project Gate Review process and procedures as a member of the project team
  - Ensure proper level of tailoring for Gate Review artifacts based upon identified project risk
  - Ensure project team and customer throughout the project life cycle in accordance with the Gate Review schedule
  - Ensure requirements tracking through project life cycle
  - Ensure Project artifact compliance to the Requirements Traceability Matrix (RTM) and track issues and corrective actions
  - Participate in the development of the County Project Evaluation & Classification Tool (CPECT) risk classification tool and assist in the evaluation of results
  - Monitor Project Risk and Opportunities Register
  - Conduct independent risk reviews & monitor/report risk mitigation activities
  - Ensure that 3rd Party Vendor performance and deliverables/artifacts conform to ITO policies and procedures
  - Recommend/Implement lessons learned for continuous improvement

- Review project deliverables and remediate as part of project team
  - Identify potential issues in cost, schedule & technical performance which could impact project artifacts and deliverables
  - Participate in Work Product Peer Reviews (WPPRs)
  - Review project issue closure plans

- Manage project Gate artifact review and approval workflow
  - Evaluate artifacts prior to Gate Review and coordinate with Project Manager (PM)/Technical Leads on remediation efforts as required
  - Establish/verify the review criteria for each artifact are achieved prior to Gate Review (these criteria are also used during Gate Review)
    - Gate Entry Criteria verification checklist
    - Gate Review Input verification checklist
    - Review criteria and Go/No-Go conditions
  - Ensure Stakeholders have reviewed artifacts and completed templates prior to Gate Review

- Manage project Gate Review process
  - Prepare Schedule/Agenda and notify participants including Gate Review lead-time scheduling for Stakeholders

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  o Lead Gate Review and rules of engagement for Gate/Artifacts (Go/No-Go decision)
  o Capture/Verify Gate Review artifact action items with participants during Gate Review and distribute
  o Capture Gate Review attendees, decisions and action items in the designated repository

- Ensure project Gate Review closure
  o Capture final updates on action items and post to designated repository
  o Ensure that Gate Review action items are closed per schedule and report non-conformance to PM

Experience: The MA Project Engineer will have experience in Mission Assurance developing and applying MA processes and procedures specific to the full project development life cycle. To be considered for this position, the candidate must minimally meet the knowledge, skills, and abilities listed below:

- Bachelors Degree
- 5 years working in a product engineering and/or a IT service environment with focus on all aspects of the product /service lifecycle to include development, verification, deployment and operation within an IT managed service environment
- 3 years in the analysis of data, trends, and process / service performance gaps using statistical methods
- 3 years experience and demonstrated knowledge of program management processes (e.g., risk management)
- 3 years experience implementing product engineering or IT service (ITIL) processes within a variety of systems or services environments; involving systems or services teams in the definition, documentation, deployment and improvement of processes.

Candidates with these preferred qualifications will be given preferential consideration:
- Bachelors degree in System Engineering or where there is no technical (B.S) degree, post graduate certifications in IT related areas
- Demonstrated proficiency in communication and/or facilitation skills which will be needed in dealing with a variety of stakeholders across the Operating Unit to include program technical staff, program managers, senior managers and customer representatives
- Proficiency in all Microsoft Office products
- Certification or extensive experience in system engineering methodologies or frameworks (i.e., CMMI-DEV, ITIL V2 or ITIL V3) which support technical aspects of the program

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12.   DATABASE ADMINISTRATOR

Description: A Database Administrator configures the Database Management System (DBMS) software, installs and configures the application database, defines file organization and indexing methods, and implements security procedures for specific user applications. The Database Administrator provides technical knowledge/expertise in the use of the DBMSs and provides table structure design, backup/restore/recovery processes and procedures, performance analysis and tuning, datafile sizing, upgrade/patch support, allocating storage, table space allocation, user account management, and may generate SQL scripts against the production/test/development databases to verify data.

Experience: This classification must have a minimum of six (6) years experience working as a Database Administrator.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree or certificate in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Entity Relationship Diagram, and Data Backup Plan.

13.   DESKTOP ENGINEER

Description: A Desktop Engineer develops, tests and implements changes or additions to the Desktop infrastructure used in delivery of the Desktop Services as described in Section 4.10 of Schedule 4.3

Experience: This classification must have a minimum of four (4) years experience working as a Desktop Engineer.

Education: Microsoft Certified Systems Engineer certification.

14.   DOCUMENTUM ARCHITECT

Description: A Documentum Architect provides technical direction to Documentum projects/tasks and is responsible for end-to-end Documentum system design.   The Documentum Architect develops, communicates, maintains, and enforces the overall architecture of the Documentum system-applications, data, and technical infrastructure. The Documentum Architect:

- Has a thorough understanding of business process design techniques and participates in the high-level business process design;
- Is a master of Documentum architecture and leads the Documentum architecture definition;

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- Has a thorough understanding of entity modeling and participates actively in high-level entity modeling activities;
- Has a thorough understanding of platform architectures and network architectures (sizes hardware, determines platforms);
- Assesses performance, tuning and capacity requirements to determine key technology decisions;
- Is responsible for the interrelated architectures of the Documentum system, that is, the integrity of design, communications, interfaces between application subsystems, and supporting databases;
- Oversees the activities of the Database Administrator and the Software Configuration Analyst;
- Thoroughly understands testing and participates in the broader levels of test planning; and

Experience: This classification must have a minimum of seven (7) years experience working on Documentum development projects. At least three (3) years of that experience must be in end-to-end system design, modeling, and tuning.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree or certificate in management information systems or computer science, (2) an associates degree with two (2) additional years experience in Documentum development, or (3) a high school diploma with four (4) additional years experience in Documentum development.

Work Products: Examples of work products include: Conceptual Architecture Diagram, Interface Design Document, System Architecture Study, Vendor Requirements Questionnaire, and Engineering Documents.

15.   DOCUMENTUM DEVELOPER

Description: A Documentum Developer acts under general supervision, and can act in a lead capacity on application assignments, and/or on complex data processing problems and can work independently. A Documentum Developer has experience in Documentum systems study, design, and programming. This classification must have knowledge of electronic computer programming; electronic data processing equipment and its capabilities; principles and techniques of studying work processes for new or revised electronic computer applications; principles of designing methods of processing data; technical report writing; content management, and statistical methods. This classification must have the ability to write complex programs and develop detailed program specifications; analyze data and situations, reason logically and creatively, identify problems, draw valid conclusions, and develop effective solutions; apply creative thinking in the design and development of methods of processing data with electronic computers; establish and maintain cooperative working relationships with those contacted in the course of the work; speak and write effectively and prepare effective reports.

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Experience: This classification must have a minimum of three (3) years experience working in Documentum software development on projects of equal or greater complexity than the County's and over five (5) years of general software development experience.

Education: This classification requires the possession of (1) a baccalaureate or equivalent university degree in management information systems or computer science, (2) an associates degree with two (2) additional years experience in software development, or (3) a high school diploma with four (4) additional years experience in software development.

Work Products: Examples of work products include: Software Detailed Design document, Unit Test Plan, Computer Programs, Software Configuration Item List, and Root Cause Analysis Form.

16. JUNIOR DEVELOPER

Description: Junior Developers perform technical or business tasks at the direction of an experienced manager or coach. Assignments are typically related to the person's field of study.

Education: This classification requires current enrollment as a full-time student. A grade point average of 3.0 or higher must be maintained.

1. Junior Developer I must be at least 16 years old. This classification includes junior or senior high school students and college students who have not yet completed their freshman year.
2. Junior Developer II classification includes students who have completed the freshman year until completion of the junior year.
3. Junior Developer III classification includes students who have completed the junior year or higher.

17. APPLICATIONS TEST ENGINEER

Description: Application Test Engineer is responsible for test plans to support application development lifecycles, including iterative and agile methods, application upgrades and maintenance.

The Application Test Engineer must be experienced in understanding requirements, design specifications, and testing strategy to develop test scenarios, requirements traceability matrices and develop testing metrics collection plans in order to plan and prepare for testing. The Application Test Engineer is responsible for carrying out application testing.

The Application Test Engineer has the ability to execute test cases and scripts, analyze test results, report on testing progress and results, facilitate defect resolution and document final test results in order to execute testing engagement. This job classification is proficient in testing processes and testing metrics in order to create and review test summary reports,

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provide testing project feedback, and archive testing assets in order to verify completion of testing.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 2 years experience in delivering testing services.

Work Products: Examples of work products include: test plans, testing scenarios and test cases, test execution reports.

18.   APPLICATIONS TEST DEVELOPER

Description: Application Test Developer is responsible for developing scripts and other testing tools in order to implement the comprehensive test plans developed by the Application Test Lead.

The Application Test Developer must be experienced in understanding software and environment requirements, design specifications, and testing strategies.   The Application Test Developer develops the technical tools needed to support the testing strategy.   The Applications Test Developer also reviews testing strategy and plans, validates requirements and specifications, develops technical test plans, develops technical test scenarios, selects test design techniques and develops testing metrics collection plans in order to plan and prepare for testing.

This labor category is experienced in testing analysis and design, functional and performance models, and test specifications to: develop models and scripts for testing, evaluate and validate test cases and scripts, validate functional models for testing, validate performance models for testing, develop and validate technical test specifications and tools, validate automated testing coverage, escalate quality issues for resolution, evaluate test automation tools and validate testing environments in order to develop test specifications and automated testing tools.

 The Application Test Developer has the ability to develop test cases and scripts, analyze complex test results from the scripts, report on test tool and testing progress and results, facilitate defect resolution and document final test results in order to execute testing engagement.   This job classification is proficient in testing processes, testing metrics and testing tool development.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum

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of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 4 years experience in delivering multiple testing services to complex projects.

Work Products: Examples of work products include: test plans, complex testing scenarios, test scripts, test tools and other automated testing, test cases and test reports.

19.   APPLICATIONS TEST LEAD

Description: Application Test Lead is responsible for the leading the development and implementation of comprehensive test plans to support traditional or agile application development lifecycles.

The Application Test Lead interacts with project teams and clients to gain an understanding of the business environment, technical context, and testing objectives for a project as a basis for determining testing requirements. The Applications Test Lead plans and leads the analysis of the testing requirements of a project in order to define a Testing Strategy, understands and recommends the use of the appropriate automated testing tool and defines the metrics to be collected to monitor the performance and effectiveness of testing for a project.
This labor category is responsible for guidance relating to testing activities for a project, communicating with appropriate stakeholders for each project and managing testing issues and risks. The test lead provides consultative support on all aspects of the testing process for a project, contributes to special studies, develops and presents testing proposals, identifies and recommends improvements to methods and standards for a project through an assessment of current testing practices, and supports implementation of recommended improvements.

The Application Test Lead provides technical leadership for all testing activities of assigned projects, acts as a mentor and coach to testing specialists and test analysts, and assigns work to others on the testing team.

Education: This classification requires the possession of (1) a master's or equivalent university degree in management information systems or computer science with a minimum of 4 years related experience, (2) a baccalaureate or equivalent university degree in management information systems or computer science and a minimum of 6 years related experience, (3) an associate's degree with at least 8 years related experience, or (4) a high school diploma with at least 10 years related experience.

Experience: This classification must have a minimum of 6 years experience in delivering multiple testing services to complex projects.

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Work Products: Examples of work products include: test strategies and plans, complex testing scenarios and test cases, test reports and work assignments.

END OF SCHEDULE